

Pillsbury Milling Complex,  
Machine Shop  
300-310 Second Street Southeast  
Minneapolis  
Hennepin County  
Minnesota

HABS No. MN-29-5-C

HABS  
MINN,  
27-MINAP,  
3-C-

## PHOTOGRAPHS

## WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey  
National Park Service  
Rocky Mountain Regional Office  
Department of the Interior  
P.O. Box 25287  
Denver, Colorado 80225

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HISTORIC AMERICAN BUILDINGS SURVEY

PILLSBURY MILLING COMPLEX,  
MACHINE SHOP

HABS No. MN-29-5C

Location: 300-310 Second Street Southeast, Block 50, Lots 11 and 12 (southwest corner of Second Street Southeast and Third Avenue Southeast), Minneapolis, Hennepin County, Minnesota.

USGS Minneapolis South Quadrangle, Universal Transverse Mercator Coordinates: Zone 15; 480100:4981060; 480320:4980940; 480260:4980800; 480040:4980940

Present Owner: The Pillsbury Company  
Pillsbury Center  
200 South Sixth Street  
Minneapolis, Minnesota 55402

Present Occupant: Pillsbury Industrial Equipment

Present Use: Produce specialized equipment designed for The Pillsbury Company

Significance: The Machine Shop was an important part of the Pillsbury Milling Complex. It is significant because of the role it played in maintaining the equipment for the entire milling operation. Without the Pillsbury Milling Complex, Minneapolis would not have become the "Milling Capital of the World..."

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: 1915.
2. Architect: None.
3. Original and subsequent owners: Pillsbury Flour Mills Company.
4. Builder and Supplier:
  - a. Builder: Horace N. Leighton Company (Information given on Building permit number 12713, Department of Building Permits, Public Health Building, Room 300, Minneapolis, Minnesota). H.N. Leighton Company was listed in the Minneapolis City Directory 1910-1915, as "General Contractors, Builders and Decorators". In 1917, the H.N. Leighton Company advertised in the Minneapolis Golden Jubilee with a description of the firm's history. Leighton was also involved with education, as a trustee of Carleton College at Northfield and president of the Minneapolis School Board.

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5. Original plans and construction: Original plans and drawings are located at the Pillsbury Mills Incorporated, The Pillsbury Company, Minneapolis, Minnesota. Early photographs and insurance maps do document that the building was rectangular shaped, with reinforced concrete structure and brick and glass enclosure. The estimated cost was projected at \$25,000 dollars (see Inspector of Building: Lot 11-12, Block 50, Addition Saint Anthony Falls, Permit Number 12713). Other sources of information were obtained through the Minnesota Historical Society, Audio-Visual Libraries and Map Collection Library, and the Minneapolis Building Permits Department.
6. Alterations and Additions: At undetermined dates, various enclosures and alternations have taken place within the building. This information is based on physical evidence.

In the northern end of the basement there is a brick enclosure that is currently being used as an employee lunchroom and locker room.

On ground level (first floor), several alterations have occurred. In the northwest corner a brick enclosure apparently houses blueprints. All windows on the east elevation have been filled in with concrete blocks. And according to the Shop's foreman, the original Minnesota White Pine wood-block floor has been replaced with concrete. This was done to accommodate stress loads. The second floor has only two apparent alterations. In the northeastern quadrant there is a wood frame enclosure that is used for offices. On the south end there are additional restrooms and locker rooms.

B. Historical Context:

The Pillsbury "A" Mill was added to the National Register of Historic Places in 1966. It was the first mill designed by an architect -- L.S. Buffington -- and from 1881 - 1919 it was considered the largest flouring mill in the world. In 1885, The London Times declared that, "this mill stands in relation to the American flour trade, as Niagara does to waterfalls. On a national scale, the Pillsbury Mill helped the northwest wheat industry by developing the use of the middlings purifier, high grinders and roller milling equipment. This enabled Spring wheat to be more competitive and of higher quality. On a local scale, the development of a superior quality of flour raised Minneapolis above Saint Louis as the milling capital of the world. And on a personal scale, Charles A. Pillsbury was of the caliber of Andrew Carnegie, Phillip Armour, Cyrus McCormick and James J. Hill, revolutionizing the Industrial Manufacturing and Marketing systems.

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The Machine Shop functioned to keep the Pillsbury Milling Complex running at record pace. Its context is within a series of improvements to the complex after 1909. When Albert C. Loring became president of the Pillsbury Flour Mills Company several changes took place. The "A" Mill was improved. In addition, a tile elevator, a concrete elevator, power plant, flour laboratory, rye mill (Phoenix Mill), South "A" Mill and Machine Shop were added to the complex. The mill continued to hold its position as the world leader until the 1930's when several economic factors affected milling and led to the decline of the milling industry in Minneapolis.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character: The Machine Shop is a two-story brick building located directly north of the Pillsbury "A" Mill. It is a rectangular-shaped structure with a two-thirds basement and a gable roof. The building is constructed mainly of brick surrounding steel and Minnesota White Pine wood. The south wall is a common wall shared by the Bran House and is constructed of rubble limestone. The Machine Shop is historically significant because it was the force that kept the milling complex equipped and running efficiently.
2. Condition of Fabric: The Machine Shop has been well maintained and most elements are still in place. The exterior brick masonry and interior wood are in sound condition.

B. Description of Exterior:

1. Overall Dimensions: The dimensions of the two-story rectangular-shaped building are the following: width of the north elevation is 102' feet, or six bays; and the width of the east and west elevation are 114'6" feet, or seven bays. The building is symmetrical in respect to the first and second floors, however, the basement is only two-thirds of the north elevation and lies on the western half of the building.
2. Foundations: The foundation is composed of different materials. The outer layer is 16" concrete reinforced with 8" by 16" steel pillars. The inner layer is 4" common brick. The total thickness of the foundation wall is 20".
3. Wall Construction: The north, east and west elevation exterior walls consist of beige bricks. The interior is painted with whitewash. The brick joints are 3/16" thick. The south wall is composed of 20" thick rubble limestone.

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4. Structural System, Framing: The original north, east and west exterior load-bearing walls are composed of brick surrounding steel columns and are 3'-0" wide by 1'-9" deep, 3'-6" wide at the northeast and northwest corners. The south wall, a common wall with the Bran House, is composed of rubble limestone and is 1'-8" thick. Next to the south walls are load-bearing steel "I" beams. Roof rafters are original Minnesota White Pine 2" by 12", 16" on center. The second floor wood joists are 2" by 12", 8" on center.
5. Chimneys: There are four sheet metal chimneys located on the roof. The major chimney is an exhaust system located at the center of the building. Located directly south are two smaller chimneys and a fourth chimney is situated in the northwest corner.
6. Openings:
  - a. Doorways and Doors:
    1. Doorways: There are three doorways located in the building. Two of the garage doorways are on the main floor's north elevation. Each have metal door panels. The third doorway is located in the basement. It has been altered and is not original.
    2. Doors: There are two doors on the main floor. One is located in the northwest corner, north elevation. The other, is located in the northeast corner, east elevation. Both doors are constructed of steel and are not original doors.

On the second floor, there are also two doors. One is located at the north end and the other is at the south. The south door is possibly an original.
  - b. Windows: A standard bay is 16'-0" on center, and contains three 9 over 9 light double hung sash, wood frame windows of single pane plate glass and plexiglass. Each window measures 3'-9" wide and 9'-0" high. Each pane is 13-1/2" wide and 16" high puttied in. The 8" wide by 8" deep by 9'-0" tall wood mullion separates the three windows with 2" wide by 8" deep jambs on the ends. A standard bay is 1'-3" deep from the inside of the wall to the outside edge of sill. The bay's thickness is centered on the encased column's thickness. The sill projects 1" from the bottom of the window frame and is made of bricks laid on edge topped with 1/2" concrete. The lintel is built up of 2 steel 3" by 6" channel sections bolted together.

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7. Roof:

- a. Shape, Covering: The roof is a gable-shaped roof, covered with asphalt roofing. The roof is a gradual slope with metal rain gutters on the east and west ends.
  1. Pneumatic tube system: On the western side of the roof, crossing from south to northwest, is the remains of a pneumatic tube system. This tube is constructed of steel.

C. Description of Interior:

1. Floor Plans:

- a. Basement: Beginning at the southwest end, there is an entrance with a down ramp descending from west to east. Approximately in the center is a circular-shaped water tank, that spans between two "I" beams in length and is approximately 5'-6" in diameter. Directly north is the employees lunchroom and locker room. East of the locker room is a series of steam pipes enclosed in a tunnel leading to the Pillsbury Research and Development Building. South of the tunnel, is a series of shelves containing thousands of parts, scattered randomly. With the exception of a narrow walkway leading from the southeast entrance to the employee lunchroom and a path to the tunnels and shelves, and entire basement is cluttered with machinery and parts.
- b. First Floor: Entering from the northwest, north elevation door, the garage doorway is to the immediate east. In the northwest corner, lies the concrete brick storage enclosure for the shop blueprints. Directly south of the brick enclosure is one of the stairways. On the western end of the building, the large machine power tools operate. The two symmetrical driveways are located in the second and fifth bays. The second stairway is located at the north end of the building toward the center. Another door is located in the northeast corner, east elevation.
- c. Second Floor: The second floor is U-shaped. At the top of the northwestern stairs, lies an enclosure that houses a computer terminal and blueprint copier. The width of the western area is approximately 16 feet. The largest area of the second floor is the eastern half. On the eastern half, an office is located at the south. There are two doors located on the east side. One door is located at the north end, and another, connects the Machine Shop to the Bran House at the south.

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2. Stairways: There are three sets of stairs. The first set is located in the northwest quadrant. It is two flights. Each series of stairs contain 21 metal covered steps and a handrail. The stairs on the main floor, located at the center, have the same characteristics as the previous stair. The stairs leading to the Bran House have 12 wood steps covered with steel and square shaped balusters.
3. Flooring: The basement has concrete floors, except in the lunchroom and locker rooms where tile is used. On the first floor, it is also concrete. At one time, it had been wood. The second floor is mostly intact, it is made of wood sub-flooring and wood flooring, with the exception of the office area which has brown carpet. The south end locker rooms and restrooms are tiled. The tiles are off-white colored.
4. Wall and Ceiling Finish: The interior brick wall finishes are mainly painted with whitewash. The south wall is also whitewashed and appears to have plaster on rubble limestone as a finish. The concrete block enclosure on the first floor northwest corner is unfinished and unpainted. The office on the second floor, is wood paneled, and the ceiling has a fluorescent lighting system. The remaining ceiling areas in the entire building are exposed and painted with whitewash.
5. Openings:
  - a. Doorways and Doors: In the basement, there are two doors, one in the lunchroom, one by the tunnel. On the first floor, there is a metal door for access to the concrete block enclosure. On the second floor, there are three doors, the wood door for the office, and the two doors for the restrooms.
  - b. Windows: Natural light played an important role in the design of the building. The need for artificial lighting was hardly necessary, but due to the filling in of the east windows on the first floor, more light was needed to accommodate the operation of the equipment.
6. Mechanical Equipment:
  - a. Heating, Air Conditioning, Ventilation: The original heating system was hot water baseboard piped in from the Pillsbury "A" Mill. On the roof are four different exhaust systems.

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- b. Lighting: Lighting is a key to operating machinery safely. Originally the building was designed to use natural daylight. However, with the filling in of the first floor windows, it caused lighting to decrease substantially. Therefore, modern electrical fixtures were installed on the first and second floors. Very little was installed in the basement. On the first floor there are 15 sodium vapor lights, 6 incandescent, and the remaining lights are fluorescent lights. The second floor has 43 fluorescent and 4 incandescent light fixtures. The office has 154 fluorescent 22" by 7" light panels.
- c. Plumbing: The plumbing fixtures are supplied from Pillsbury "A" Mill's water supply. Pillsbury uses a shared well. It does not use city water.

D. Site:

- 1. General Setting and Orientation: The building faces north onto Second Street Southeast. The building is located on southeast corner of Second Avenue Southeast and Third Avenue South. It is directly north of the Pillsbury "A" Mill and directly east of the Saint Anthony Main Shopping Mall complex. The river is to the south of the Machine Shop.

PART III. SOURCES OF INFORMATION

- A. Original Architectural Drawings: Available on microfilm at Pillsbury Mills Incorporated, The Pillsbury Company, Minneapolis, Minnesota.
- B. Early Views:
  - 1. View South along Second Street Southeast, circa 1932, Catalog Number MH5.9MP2.2 r131, Minnesota Historical Society, Saint Paul, Minnesota. (photograph)
  - 2. Aerial View of Pillsbury Mill Complex from the Southwest, circa 1945, Catalog Number MH5.9 MP1K h1, Minnesota Historical Society, Saint Paul, Minnesota. (photograph)
- C. Bibliography:
  - 1. Primary and unpublished sources:
    - a. Inspector of Buildings, 116-128 Third Avenue Southeast, (Also 300-310 Second Street Southeast) Lot 11-12, Block 50, Saint Anthony Falls Addition, City of Minneapolis, Building Permits Department, Public Health Building, Room 300.



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- b. Inspector of Buildings, Permit to Build Inside Fire Limits, Number A12713, City of Minneapolis, Building Permits Department, Public Health Building, Room 300.
- c. Tract Index, Saint Anthony Falls Subdivisions, Block 50, November 3, 1849 - December 9, 1925, Hennepin County Government Center, 8th Floor.

2. Secondary and published sources:

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- n. Northwestern Miller, 1910-1916, Anniversary Issue, 1923.

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- p. Powell, William J., Pillsbury's Best: A Company History from 1869, Minneapolis, Pillsbury Company, 1985.
- q. Saint Anthony Falls Rediscovered, James Berman, Ed; Minneapolis: Riverfront Development Coordination Board, City of Minneapolis, 1980.
- r. Sanborn Atlas, 1885, 1890, 1912-41, Staver, H.C., Implement Company, Annual Catalog, Chicago, 1984.
- s. Wagner, William J., Alley Spring Roller Mill Architectural Data Section, Historic Structures Report, Des Moines, Iowa, Wagner Marquart Wetherell Architects, 1977.

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PART IV. PROJECT INFORMATION

This project was prepared as a class project for Architecture 5143, Historic Building Research and Documentation, a class offered in the School of Architecture and Landscape Architecture at the University of Minnesota, Minneapolis, Minnesota. The class project was prepared under the direction of Professor Foster W. Dunwiddie in cooperation with the State Historic Preservation Office of the Minnesota Historical Society, Saint Paul, Minnesota. Historical data was compiled by Nelson Gerard Paguyo and Dana Kirkegaard, University of Minnesota, June 1987.